

Patent Claims

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1. A method of activating an inactive terminal (6) of a data network (1), which terminal is connected to a telephone network (4), for establishing a connection through the data network (1) between a further terminal (5) and the terminal (6) to be activated, **characterized by** the following steps:
- establishing a connection to a server (11) of the data network (1) and transmitting an identifier of the terminal (6) to be activated to the server (11) of the data network (1);
 - receiving the identifier at the server (11) of the data network (1);
 - interpreting the identifier at the server (11) of the data network (1) to determine the number of the terminal (11) to be activated;
 - making a call from the server (11) of the data network (1) through the telephone network (4) to the terminal (6) to be activated;
 - signaling the identity of the server (11) of the data network;
 - receiving the call and interpreting the signaling at the terminal (6) to be activated;

- terminating the call to the terminal (6) by the server (11) of the data network (1); and
- establishing a connection from the terminal (6) to be activated to the data network (1) if the signaling indicates that the call came from a server (11) of the data network (1).

2. A method as claimed in claim 1, characterized in that the establishment of the connection to the server (11) of the data network (1) and the transmission of the identifier of the terminal (6) to be activated to the server (11) of the data network (1) are effected by the further terminal (5).

3. A method as claimed in claim 1 ~~or 2~~, characterized in that in order to establish a connection between the further terminal and the terminal to be activated,

- the terminal (6) to be activated establishes a connection to a server (11) of the data network (1) and transmits its identifier to the server (11) or the identifier is determined by the server (11);
- the data network addresses of the two terminals (5, 6) are transmitted by the server (11) of the data network to the respective other terminal (5; 6), or are retrieved by the terminals (5, 6) from the server (11); and
- a connection is established by the terminals (5, 6) through the telephone network (4) and the data network (1).

claim 1

4. A method as claimed in ~~any one of claims 1 to 3~~, characterized in that the data network (1) is designed as an Internet Protocol (IP) network.

5. A method as claimed in claim 4, characterized in that the further terminal (5) is a calling party's

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terminal (5) connected to a telephone network (4), and in that the terminal (6) to be activated is a called party's terminal (6) connected to the telephone network (4), the called party's terminal (6) being activated to set up a voice call between the calling party's terminal (5) and the called party's terminal (6) through the IP network (1).

6. A method as claimed in claim 5, characterized by the following steps:

- The calling party dials at his or her terminal (5) the number of the terminal (6) of the called party;
- a first Voice-over-IP (VoIP) adapter unit (9), connected between the terminal (5) of the calling party and the telephone network (4), receives the dialed number;
- the first VoIP adapter unit (9) establishes a connection through the telephone network (4) to a POP server (2) and through the latter to the data network (1);
- the first VoIP adapter unit (9) transmits the called-party number and its own IP address over the IP network (1) to a VoIP server (11) of the data network (1);
- the VoIP server (11) receives the called-party number and the IP address of the first VoIP adapter unit (9);
- the VoIP server (11) dials up the terminal (6) of the called party through the telephone network (4);
- over the telephone network (4), the number of the VoIP server (11) is signaled to the terminal (6) of the called party;
- a second VoIP adapter unit (10), connected between the terminal (6) of the called party and the telephone network (4), receives the number of the VoIP server (11);

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- the second VoIP adapter unit (10) compares the number with the numbers of known VoIP servers;
- the second VoIP adapter unit (10) identifies the VoIP server (11) and prevents the incoming call from being transferred to the terminal (6) of the called party;
- the second VoIP adapter unit (10) establishes a connection to a POP server (3) through the telephone network (4);
- the second VoIP adapter unit (10) transmits its IP address to the VoIP server (11) over the IP network (1);
- the VoIP server (11) transmits the IP address of the first VoIP adapter unit (9) and the IP address of the second VoIP adapter unit (10) to the respective other VoIP adapter unit (9; 10);
- an IP connection is established from the first VoIP adapter unit (9) to the second VoIP adapter unit (10);
- the second VoIP adapter unit (10) causes a call to be sent to the terminal (6) of the called party; and
- a voice call is established between the terminal (5) of the calling party and the terminal (6) of the called party if the called party accepts the call.

7. A method as claimed in claim 6, characterized in that the VoIP server (11) and the POP server (2; 3) are combined in a common POP/VoIP server.

8. A server (11) of a data network, **characterized by**
- means for receiving from a terminal (5) an identifier of a terminal (6) to be activated, which is connected to a telephone network (4);

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- means for making a call over the telephone network (4) to the terminal (6) to be activated; and
- means for terminating the call to the terminal (6) to be activated.

9. A server (11) as claimed in claim 8, characterized in that it is designed as an access server (2; 3) of an IP network (1).

10. A server (11) as claimed in claim 8 or 9, characterized by comprising means for interpreting the identifier and determining the number of the terminal (6) to be activated.

11. A server (11) as claimed in ^{claim 8} ~~any one of claims 8 to 10~~, characterized in that the server (2, 3, 11) comprises means for accepting a call received from the terminal (5) over the telephone network (4), and means for establishing a connection from the terminal (5) to the data network (1).

12. An adapter unit (9) connected between a terminal (5; 6) of a telephone network (4) and the telephone network (4), **characterized by**

- means for establishing a connection from the terminal (5) to a server (2; 3) of a data network (1) over the telephone network (4);
- means for receiving the call of a server (11) of the data network (1);
- means for interpreting the number of a caller;
- means for comparing the number of the caller with the numbers of known servers of the data network;
- means for retrieving and/or receiving a data network address of a further adapter unit (10; 9) of the caller from the server of the data network (1); and

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- means for establishing a data call to the further adapter unit (10; 9) through the data network (1).

13. An adapter unit (9; 10) as claimed in claim 12, characterized by comprising means for transmitting the identifier of a terminal (6) to be activated or the identification of a called party to the server (2; 3) of the data network (1).

14. An adapter unit (9; 10) as claimed in claim 12 ~~or 13~~, characterized by being implemented as a microcomputer with a processor, a memory, an interface to the telephone network (4), and an interface to an Internet Protocol (IP) network (1).

15. A telephone (5, 6) **characterized in** that an adapter unit (9; 10) as claimed in ^{claim 12} ~~any one of claims 12 to 14~~ is incorporated therein.

16. A microcomputer, preferably a personal computer, comprising a modulator-demodulator (modem) or an ISDN adapter, **characterized in** that an adapter unit (9; 10) as claimed in ^{claim 12} ~~any one of claims 12 to 14~~ is incorporated in the modem or the ISDN adapter.

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